AMENDMENTS TO THE CLAIMS

1. (Currently amended) A method for identifying an agent capable of modulating expression of CYP2S1 by a cell, comprising the steps of:

a) providing a cell ~~or cells capable of expressing CYP2S1~~ comprising a reporter gene or CYP2S1 gene under control of a regulatory sequence shown in Figure 7 comprising at least an XRE-like sequence, an AP-1-like sequence or a RARE-like sequence;

b) contacting a test agent with said cell~~(s)~~;

c) incubating said cell~~(s)~~ under conditions which are conducive to enable expression of said CYP2S1 gene or reporter gene when in the absence of the test agent; and

d) detecting ~~whether or not the test agent modulates~~ modulation of expression of said CYP2S1 gene or said reporter gene.

2. (Cancelled)

3. (Currently amended) The method according to claim [[2]] 1 wherein the reporter ~~nucleic acid is capable of encoding~~ gene encodes glutathione S-transferase, an antibiotic, a chromogenic substrate, ~~such as~~ β-galactocidase, luciferase, a fluorescent protein, ~~such as~~ green fluorescent protein, or chloramphenicol acetyl transferase.

4. (Currently amended) The method according to ~~any preceding~~ claim 1 wherein said cell~~(s)~~ is~~/are~~ a skin cell~~(s)~~.

5. (Cancelled)

6. (Currently amended) The method according to ~~any of claims 1 to 3~~ claim 1 wherein said cell~~(s)~~ is a ~~mammalian,~~ mammalian or bacterial~~, yeast or insect~~ cell which has been genetically engineered so as to be capable of expressing said CYP2S1 gene or said reporter ~~nucleic acid~~ gene.

7. (Currently amended) The method according to claim [[6]] 4, ~~when dependent on claim 1~~ wherein the cell~~(s)~~ has~~/have~~ been genetically engineered so as to comprise a nucleic acid capable of encoding CYP2S1 and a sequence upstream thereof as shown in Figure 7 capable of controlling transcription and/or translation of said nucleic acid.

8-14. (Cancelled)

15. (Currently amended) The method according to ~~any one of claims 1 and 4 to 8~~ claim 39 wherein detection of any modulation in the expression of CYP2S1 is carried out using an antibody specifically reactive to CYP2S1.

16. (Currently amended) The method according to ~~any one of claims 1 and 4 to 8~~ claim 39 wherein detection of any modulation in the expression of CYP2S1 mRNA is carried out using quantitative real time PCR analysis.

17. (Cancelled)

18. (Currently amended) A recombinant expression vector comprising a nucleic acid capable of encoding CYP2S1 or a reporter protein under transcriptional and/or translational control of ~~the~~ an isolated nucleic acid molecule ~~according to claim 17~~ comprising the regulatory sequence shown in Figure 7.

19. (Cancelled)

20. (Currently amended) A host cell comprising the recombinant vector according to ~~either of claims 18 or 19~~ claim 18.

21. (Currently Amended) The host cell according to claim 20 wherein the cell is a mammalian[[,]] or bacterial~~, yeast or insect~~ cell which has been genetically engineered so as to be capable of expressing CYP2S1 or said reporter nucleic acid.

22. (Cancelled)

23. (Original) A method of making CYP2S1 comprising culturing the host cell according to claim 20 under conditions such that CYP2S1 is expressed; and recovering CYP2S1.

24. (Cancelled)

25. (Currently amended) A pharmaceutical composition comprising ~~isolated~~ CYP2S1 ~~according to claim 24~~ in combination with a pharmaceutically acceptable carrier ~~therefore~~.

26-31. (Cancelled)

32. (Currently amended) A method of preventing, treating or ameliorating in a subject a skin condition ~~in a subject~~ related to increased or decreased CYP2S1 expression in skin, which comprises administering to ~~a mammalian~~ the subject CYP2S1, a vector capable of expressing CYP2S1, or an agent capable of modulating expression of CYP2S1 in skin tissue.

33. (Currently amended) A method of diagnosing a skin condition associated with increased or decreased expression of CYP2S1, or a predisposition to ~~such~~ a skin condition comprising detecting a level of CYP2S1 in a test skin sample according to the method of claim 39 and comparing ~~this~~ said level against a normal control, wherein ~~such that~~ an increase or decrease in the CYP2S1 ~~expression~~ level in the test skin sample as compared to the normal control is indicative of [[a]] said skin condition or said predisposition to a skin condition.

34. (Currently amended) A method of diagnosing a skin condition associated with increased or decreased expression of CYP2S1 or a predisposition to ~~such~~ a skin condition associated with increased or decreased expression of CYP2S1, comprising detecting a polymorphism in a CYP2S1 gene or upstream sequence thereof, which ~~effects~~ affects expression of CYP2S1, wherein detection of a polymorphism is indicative of [[a]] said skin disorder ~~associated with increased or decreased CYP2S1 expression~~, or said predisposition thereto.

35. (Currently amended) A method of detecting effectiveness of a skin treatment to be administered to a patient suffering from a skin condition, comprising the steps of:

a) obtaining a first sample of diseased skin from the patient and detecting according to the method of claim 39 a level of CYP2S1 ~~expression~~ in the first sample ~~of diseased skin~~ prior to administration of the skin treatment;

b) administering said skin treatment to the patient; and

c) ~~after a period of time,~~ obtaining a ~~further~~ second sample of diseased skin from the patient and detecting according to the method of claim 39 ~~whether or not there has been~~ an increase or decrease in the level of CYP2S1 compared to the first sample ~~expression~~.

36. (Currently amended) A method of detecting whether or not a subject is likely to respond to a skin treatment with a chemical which is metabolisable by CYP2S1, comprising the steps of:

a) obtaining ~~samples~~ a first sample of diseased skin and a second sample of non-diseased skin from a subject; and

b) detecting according to the method of claim 39 a level of CYP2S1 ~~expression~~ in the ~~diseased and non-diseased~~ first and second samples

wherein an increase in ~~expression of~~ the CYP2S1 level in ~~diseased skin~~ the first sample compared to the second sample is indicative of a subject who may respond favourably to ~~a chemical which is metabolisable by CYP2S1~~ said skin treatment.

37. (Currently amended) A method of identifying ~~possible~~ a new skin treatment drug ~~candidates~~ candidate comprising contacting the drug candidate with CYP2S1 and ~~observing for~~ detecting metabolites of said drug candidate.

38. (Currently amended) A method of improving effectiveness of a skin treatment being administered to a subject comprising the steps of

a) detecting according to the method of claim 39 a level of CYP2S1 in the skin of said subject; and

b) either increasing or decreasing ~~expression~~ the level of CYP2S1 in ~~diseased~~ the skin ~~to be treated~~ of said subject receiving said skin treatment.

39. (New) A method of detecting a level of CYP2S1 in a skin cell, comprising determining the level of expression of CYP2S1 in said skin cell.